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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,414	06/21/2001	Rosa Maria Gomez	60011320-1	5748

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HEWLETT-PACKARD COMPANY
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EXAMINER

MOUTTET, BLAISE L

ART UNIT PAPER NUMBER

2853

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,414

Applicant(s)

GOMEZ ET AL.

Examiner

Blaise L Mouttet

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on January 8, 2003 and May 5, 2003 have been entered.

Specification

2. The disclosure is objected to because of the following informalities:

The specification should be amended to refer to the US patent application of co-pending applications number rather than the attorney docket number as on page 9, lines 22-26 (if this information is not yet available an amendment to the specification should be provided as soon as the information becomes available).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14, 16, 17, 19-21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Takada et al. US 5,596,353.

Takada et al. discloses, regarding claim 14, an inkjet printing device for printing on a medium comprising:

a processor (1101) for determining a level of print quality required for a received print job (figure 1, column 8, lines 23-24, column 12, lines 51-67);

an ink drop detector (1014) for detecting the operating characteristics of a plurality of nozzles to be used to print the print job (figure 1, column 7, lines 15-30 refers to the ink drop detector which detects the density of ink drops from a recording head on a printed page);

said processor further being capable of determining that said operating characteristics of said plurality of nozzles are sufficient to meet said level of print quality, and in response to said determination, causing said inkjet printing device to print said print job (column 12, lines 58-63).

Regarding claims 16 and 17, the reference print quality level is subject to setting a reference print mode (the print mode is being interpreted as the reference density which is changed by the user in accordance with a desired image as described in column 12, lines 58-63).

Regarding claim 19-21 and 24, a maintenance procedure comprising capping, purging and wiping the nozzles is carried out to repair any non-functioning nozzles when the inkjet printer is idle (column 22, lines 13-29).

4. Claims 1-7, 14-19, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Nohata et al. US 6,056,386.

Nohata et al. discloses, regarding claim 1, a method of servicing a pen (5) in an inkjet printing device, said pen (5) comprising a plurality of nozzles (figures 3A, 3B), said method comprising:

receiving a print job (figure 11A, S101, column 17, lines 41-43);

determining a level of print quality (i.e. normal mode vs. economy mode) required for said print job (figure 11A, S102, column 17, lines 44-49);

detecting the operating characteristics of a plurality of nozzles to be used to print said print job (figure 11A, S105-S111, column 17, line 61 - column 18, line 55); and

comparing said operating characteristics of said plurality of nozzles to said required level of print quality for said print job (Nb, Ny, Nm, Nc) (S107, S109b, S110b, S111b) and, in the event, based on the comparison, that said operating characteristics of said plurality of nozzles are sufficient to meet said level of print quality, printing said print job (S104, column 18, lines 53-55).

Nohata et al. discloses, regarding claim 14, an inkjet printing device for printing on a medium comprising:

a processor (24) for determining a level of print quality (i.e. normal vs. economy) required for a received print job as shown and described in relation to figure 6 and step 102 of figure 11a;

an ink drop detector (8) for detecting the operating characteristics of a plurality of nozzles to be used to print said print job as shown and described in relation to figure 4;

said processor (24) further being capable of determining that said operating characteristics of said plurality of nozzles are sufficient to meet said level of print quality (S107, S109b, S110b, S111b), and in response to said determination, causing said inkjet printing device to print said print job (S104).

Regarding claims 2-5 and 15-18, the level of print quality (i.e. normal mode vs. economy mode) is based upon resolution (column 17, lines 20-26), a print mode (normal vs. economy), a setting of the print device (column 17, lines 44-49) and an amount of media coverage (column 3, lines 44-51).

Regarding claims 6, detecting the operating characteristics of the nozzles includes drop detection by sensor (8) (figure 5, column 12, line 59 - column 13, line 6).

Regarding claims 7 and 19, maintenance is scheduled in the event of faulty nozzles (column 23, lines 1-11).

Regarding claim 26, the printing step (S104) is disclosed within the method without any preceding maintenance procedure (figure 11A and 11B).

Regarding claim 27, the determining step is capable of distinguishing between economy and normal print modes for print jobs as explained in relation to figures 11A and 11B.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8, 9, 11, 20, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohata et al. US 6,056,386 in view of Fukazawa et al. US 5,398,054.

Nohata et al. discloses the claimed invention including the specification of performing maintenance (column 23, lines 1-11).

Nohata et al. fails to disclose that the maintenance procedure includes a wiping procedure performed after the pen remains in an idle state for a period of time.

Fukazawa et al. discloses performing a wiping operation of a pen with a rubbing member (wiper) after a period of time that the pen remains idle (figure 6, column 6, line 60 - column 7, line 8, column 7, lines 56-60).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to perform a wiping operation after an amount of idle time as taught by Fukazawa et al. in the maintenance procedure of Nohata et al.

The motivation for doing so would have been to automatically remove ink films from the inkjet pen without user intervention as taught by column 3, lines 47-58 of Fukazawa et al.

6. Claims 9, 10, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohata et al. US 6,056,386 in view of Gast et al. US 5,583,547.

Nohata et al. discloses the claimed invention including the specification of performing maintenance (column 23, lines 1-11).

Nohata et al. fails to disclose that the maintenance procedure includes a wiping procedure performed after a predetermined number of ink drops has been exceeded.

Gast et al. discloses performing a wiping operation for an inkjet pen after a predetermined amount of ink drops have been exceeded (column 4, lines 63 - column 5, line 4).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to perform the inkjet cleaning operation of Nohata et al. in the event that a predetermined number of ink drops have been exceeded as taught by Gast et al.

The motivation for doing so would have been in order to automatically determine appropriate cleaning intervals to remove ink films from the inkjet pen as taught by column 2, lines 2-5 of Gast et al.

7. Claims 12, 13, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohata et al. US 6,056,386 in view of Stewart et al. US 5,455,608.

Nohata et al. discloses the claimed invention including the specification of performing maintenance with a sequence of different servicing procedures (column 23, lines 1-11).

Nohata et al. fails to disclose that the maintenance procedure includes performing the recovery based on whether the level of print quality is met or that the servicing is repeatable based on effectiveness.

Stewart et al. discloses performing a maintenance procedure for an inkjet pen based on whether a level of print quality is met and repeating the servicing based on effectiveness as shown and described in relation to figure 8.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to perform maintenance as taught by Stewart et al. in the maintenance of Nohata et al.

The motivation for doing so would have been to achieve improved elimination of clogged nozzles as taught by column 1, lines 27-51 of Stewart et al.

Additional Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Endo EP 1 065 056 discloses setting a type and timing of ink drop inspection in accordance with a chosen print mode. Endo discloses that a flying droplet ink drop detector, diaphragm ink drop detector and a patch ink drop detector.

Response to Arguments

9. Applicant's arguments filed May 5, 2003 have been fully considered.

The applicant has overcome the prior rejection of claim 1 and the claims dependent therefrom based on the newly claimed subject matter. However the new subject matter necessitated additional searching and consideration of the prior art resulting in the new rejection contained above.

The applicant has argued, regarding the 35 USC 102 rejections utilizing Takada et al. US 5,596,353 as drawn toward claims 14, 16, 17, 19-21 and 24 that a sensor for detecting ink drops ejected on a recording media is not an ink drop detector.

The examiner disagrees and points out that the applicant has disclosed just such a drop detector as one possible ink drop detector in the specification as originally filed (see page 9, lines 27-29).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet whose telephone number is (703) 305-3007. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams, Art Unit 2853, can be reached at (703) 308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet May 19, 2003

BM 5/19/2003



JUDY NGUYEN
PRIMARY EXAMINER